

Overview of few amendments to Regulation (EU) 1178/2011 (RMT.0196 Update of FSTD requirements)

ONLY FOR INFORMATION

This document presents an extract of few amendments in Regulation (EU) No 1178/2011 (Aircrew Regulation) proposed in the context of RMT.0196. These amendments are result of comments raised during the focused consultations with the Advisory Bodies in June 2023, March, June and September 2024 and the consequent discussions and conclusions.

EASA would like to inform the Advisory Bodies about these latest amendments.

The table below summarizes these latest amendments with reference to the legal provision and the description of the change. An overview of these changes will be provided at the focused consultation with the Advisory Bodies on 9 -11 December 2024.

An excerpt of these few proposed amendments to the Aircrew Regulation is attached with rationale of the changes.

Legal provision in Aircrew Regulation	Latest amendments to the hard law changes after the focused consultation in June 2023
Article 10b	<p>New point (3) is developed to define the cases of FSTD qualified to multiple FSTD qualification types and levels (e.g. FTD2/FNPTII). This point is added as a result of the focused consultation in March 2024.</p> <p>Point (4) is amended to establish a deadline for the Member States to organise their systems to issue FSTD qualification certificates according to the new format, laid down in Part ARA.FSTD. This amendment is introduced based on the comments from some MS that after a certain moment all MS should exchange the FSTD certificates to enable harmonisation and better standardisation.</p> <p>In Point (5) the obligation for the organisation operating the FSTD to provide the ESL at the request of the competent authority is removed following comments and conclusions that this might be more restrictive than the provided opportunity for submission of the ESL not later than 1 year after the application of the new amendments.</p>
FCL.036	Based on the comments from the stakeholders in September 2024 on the need to clarify how to treat newly qualified FSTD with interim qualification, the equivalence to FFS interim level C is established.
ARA.FSTD.100	New point (e) is proposed to due to comments and conclusions that the rules shall specify the obligations of the authority in case of detected non-compliance of an FSTD with its qualification basis or when the equipment specification list (ESL) contains inaccurate information about FSTD.
ARA.FSTD.135	The provision is restructured, based on the comments from the Advisory Bodies and conclusions that the rule should clarify how the authority reacts in

	<p>case of non-compliance of the organisation operating the FSTD and in case of non-compliance of the FSTD. Therefore, the point ARA.FSTD.135 is split in two points (a) and (b), addressing: enforcement measures when the organisation operating the FSTD is not in compliance with the requirements (point a) and enforcement measures in case of non-compliance of an FSTD (point b).</p>
<p>Appendix IV to ANNEX VI (Part-ARA) – Flight simulation training device qualification certificate</p>	<p>Following the comments from the focused consultations in March and September 2024:</p> <ul style="list-style-type: none"> - a new row “Additional capabilities” is added in the FSTD template to identify whether the FSTD has MCC, UPRT qualification. The reason to add it in the QC is that MCC/UPRT is an additional capability of the FSTD which should be granted in the qualification process by the authority. - it is indicated that FSTD feature “Flight Controls Forces & Hardware”, similarly to the feature “Aircraft systems” may be marked with an asterisk (*) in the QC. - For FSTD with interim qualification, it is proposed that when the certificate indicates the fidelity level, the wording “interim” should be added in the column ‘Fidelity Level’ for the applicable features in the table ‘FSTD Capability Signature’. - The instructions are amended to established to provide clarity how to describe an FSTD with G fidelity level. The provision is aimed at establishing a standard approach in describing such FSTDs.
<p>ORA.FSTD.100</p>	<p>New point (d) is established to request the organisation operating FSTD to provide information on the FSTD performance, use and other characteristics. Such requirement already exists in AMC2 ORA.FSTD.100. It is proposed to move it in the hard law to ensure legal clarity and certainty.</p>
<p>ORA.FSTD.105</p>	<p>The whole provision is redrafted to address the feedback from the Advisory Bodies during consultations in March and September 2024.</p> <p>Considering the feedback from the Advisory bodies during the workshop on the draft CS-FSTD in September 2024, EASA proposes that functions and subjective tests contained in the Master Qualification Test Guide (MQTG) are conducted progressively over a 24-month cycle, e.g. different from the cycle proposed for the objective tests.</p> <p>Following questions from stakeholders, a legal obligation for the organisation operating FSTD is established to address non-compliance identified during the conduct of the tests by taking corrective actions(s) and keep records of them in its system.</p>
<p>ORA.FSTD.200</p>	<p>The text of the proposed provision is re-drafted after the focused consultation in September 2024 with the Advisory Bodies to align with the new CS-FSTD, mainly regarding the certification specifications for the validation data roadmap, the engineering report and the validation data.</p>

ORA.FSTD.230

After review of the hard law amendments, it is proposed that the entire point ORA.FSTD.235 is deleted, as the changes proposed in ORA.FSTD.110 are considered comprehensive for the management of modification of FSTD. Therefore, this point is deemed redundant.

The current point (d) is moved in ORA.FSTD.105 as it refers to obligation of the organisation how to ensure continuation of the FSTD qualification in case of de-activation/re-activation of the FSTD.

Article 10b – Flight simulation training devices

[...]

2. From [Reference to start of application of FCS framework and new FSTD QC template], Member States and EASA shall, when re-issuing FSTD qualification certificates in accordance with the requirements of Annex VI (Part-ARA) for FSTDs which were qualified in accordance with certification specifications other than CS-FSTD, do the following:
 - (a) upon application by the certificate holder, complete the section 'FSTD capability signature (FCS)' of the certificate with:
 - (i) in the case of full flight simulators (FFS) which were qualified in accordance with JAR-STD 1A amendment 3 or JAR-STD 1H initial issue or later, and in the case of flight training devices level 2 (FTD 2) and level 3 (FTD 3) which were qualified in accordance with JAR-STD 2A initial issue or JAR-STD 2H initial issue or later, and in case of flight and navigation procedure trainers (FNPT) which were qualified in accordance with JAR-STD 3A change 1 or JAR-STD 3H initial issue or later:
 - (A) an assigned FCS in accordance with Appendix IX to Annex VI (Part-ARA); or
 - (B) the FCS, after an evaluation of the FSTD in accordance with CS-FSTD; or
 - (ii) in the case of FFS, FTD 2 and FTD 3, and FNPT, other than those specified in point (a)(i):
 - (A) an assigned FCS in accordance with Appendix IX to Annex VI (Part-ARA), after an evaluation of the FSTD in accordance with the certification specifications referred to in point (a)(i), as applicable; or
 - (B) the FCS, after an evaluation of the FSTD in accordance with CS-FSTD; or
 - (iii) in the case of flight training devices level 1 (FTD 1), the FCS, after an evaluation of the FSTD in accordance with CS-FSTD; or
 - (iv) in any case where an FSTD has been qualified using special conditions in accordance with point ARA.FSTD.100(h)(1) of Annex VI (Part-ARA), the FCS, after an evaluation of the FSTD; or
 - (b) in all other cases:
 - (i) re-issue the FSTD qualification certificate without completing the section 'FSTD capability signature (FCS)';
 - (ii) when re-issuing FSTD qualification certificates for a BITD, include the FSTD Specifications specified in Appendix IV to Annex VI (Part-ARA), as applicable until [Reference to the day before start of application of the FCS framework / new template].
 - (c) before re-issuing an FSTD qualification certificate with an FCS in accordance with point (a), inform the applicant about the result of the re-evaluation.
3. When acting in accordance with point 2(a) in cases where an FSTD is qualified to multiple FSTD qualification types and levels, Member States and EASA shall merge those FSTD qualification

certificates into a single FSTD qualification certificate with one FSTD capability signature (FCS). In such cases Member States and EASA shall do the following:

(a) In case an FSTD meets the qualification basis as referred in point 2(a)(i), the Member State and EASA shall:

(i) take the highest fidelity level for each feature, resulting from a comparison of the assigned FCS for each qualification; or

(ii) in case where the FSTD certificate holder applies for an FCS, determine the FCS after an evaluation of the FSTD.

(b) In case an FSTD does not meet the qualification basis as referred to in point 2(a)(i) for each qualification certificate, Member State and EASA shall issue the FSTD qualification certificate with an FCS that is determined in accordance with points (ii) to (iv) of point 2(a), as applicable.

4. Member States and EASA shall exchange, not later than [Reference to start of application of FCS framework + 18 months], the existing FSTD qualification certificates with certificates complying with the format laid down in Appendix IV to Annex VI (Part-ARA) after having received and reviewed:

(a) the equipment specification list (ESL) and

(b) a statement confirming that the organisation has established compliance with Part-ORA, Subpart FSTD, as amended with [Reference to amending Regulation].

When exchanging the existing FSTD qualification certificates in accordance with this point, Member States and EASA shall act in accordance with point 2. When the Member State and EASA issue the FSTD qualification certificate in accordance with the format laid down in Appendix IV to Annex VI (Part-ARA), the equipment specification list developed for that FSTD certificate shall become part of the FSTD qualification.

5. From [Reference to start of application of FCS framework and new FSTD QC template], holders of FSTD qualification certificates shall, for each FSTD qualification certificate other than BITD, develop an equipment specification list (ESL) and submit it to the competent authority, together with a statement confirming that the organisation has established compliance with Part-ORA, Subpart FSTD, as amended by [Reference to amending Regulation], in any of the following cases:

(a) when applying for the re-issue of the certificate in accordance with the requirements of Annex VII (Part-ORA);

(b) when the FSTD is intended to be used for the conduct of training in accordance with Annex I (Part-FCL) or the requirements of Commission Regulation (EU) No 965/2012, in accordance with a new or amended training programme;

(c) in any case, no later than [Reference to start of application of FCS framework + 1 year].

6. A basic instrument training devices (BITD) qualification certificate shall remain valid subject to recurrent evaluations which shall be conducted by the competent authority every 3 years.

Rationale

After the focused consultations in 2023/2024:

Point 3 is introduced as a result of the comments from the Advisory Bodies (March 2024) that the rules do not clarify how to treat FSTDs qualified to multiple different FSTD types and qualification levels in the context of FCS framework. For such FSTDs (e.g. FNPT II MCC/FTD2), there are two possible options:

- Option 1: stay legacy with both qualification certificates and continue "business as usual", without any change to their current use/credits.
- Option 2: on voluntary basis, such FSTDs can be moved to FCS framework, while having a single FCS. The FCS would be determined based on their PRD. In cases where the FSTD meet the qualification basis, as referred in point 2(a)(i) (threshold PRD, they can get assigned FCS by merging the assigned FCS for each qualification and taking the highest fidelity level for each feature. In case, the FSTD does not meet the threshold PRD, they can be evaluated to get an FCS or assigned FCS if the FSTD is modified to meet the threshold PRD. It is also possible that the FSTD gets an assigned FCS (because it meets the threshold PRD), however the organisation operating FSTD requests an evaluation and the FSTD gets an FCS.

In Point (4) amendments are proposed after the comments from Member States that that the rule should clarify when the competent authorities are expected to exchange the FSTD certificates with certificates according to the new format, laid down in (Appendix IV to Annex VI (Part-ARA)). Part ARA.FSTD. This amendment is introduced based on the comments that after a certain moment all MS shall exchange the FSTD certificates in order to enable harmonisation and better standardisation. The proposal is that all existing FSTD certificates are exchanged with the certificates according to the new format not later than 18 months after the applicability of the rule. The rationale is: (1) the competent authorities would not be required to maintain for an indefinite time two qualification templates (the new one and the former one); (2) the timing is defined considering the latest deadline for the organisations to provide ESL (12 months after rules are applicable) plus 6 months more for the competent authorities to re-issue the FSTD certificates in accordance with the new format. Furthermore, it is proposed that Member States exchange the existing FSTD qualification certificates with certificates complying with the new format only after receiving and reviewing the equipment specification list (ESL) for each FSTD certificate and a statement that the organisation has established compliance with the relevant changes in Subpart ORA.FSTD. The ESL will become part of the FSTD qualification only after the Member State re-issues the FSTD qualification certificate in accordance with the new format. By adding such provision, it is clarified that it is considered incompatible that an FSTD would have an ESL supported by the FSTD certificate which follows the former FSTD format. The ESL will be "activated" as part of the FSTD qualification once the authority issues the FSTD qualification certificate according to the new format, as both documents form the FSTD qualification.

Point 5 introduces the requirement for the organisation operating the FSTD to develop and submit to the competent authority an equipment specification list (ESL) for each FSTD, together with a statement confirming that the organisation has established compliance with the amended rules in Subpart ORA.FSTD. This is a key requirement with regard to the existing FSTD as ESL is considered an integral part of the FSTD qualification. All cases under which the organisation operating the FSTD needs to submit the ESL are exhaustively mentioned in points 5(a)-(c).

- In scenario 5(a), the operator shall submit ESL when it applies for re-issuance of the qualification certificate;
- In scenario 5(b), the operator submits the ESL to substantiate the suitability of the FSTD for the new/amended training programme.
- Scenario 5(c) covers all other cases where operator shall provide ESL within an administrative deadline. The rationale is that within a certain period all FSTD, except BITD shall have ESL.

In this point, a scenario to provide ESL at the request of the competent authority is deleted based on the comments and conclusions that it might be more restrictive than the provided opportunity for submission of the ESL not later than 1 year after the application of the new amendments.

FCL.036 Use of FSTDs for training, testing and checking

RMT.0196

When requirements of this Annex (Part-FCL) refer to FSTD types and levels, applicants shall be entitled to comply with these requirements by using FSTDs whose qualification certificate includes an FCS, provided that all the following applies:

(a) for each feature, the FCS indicates a fidelity level which is equal to or higher than the equivalent determined in the tables below:

(1) for aeroplanes:

FSTD type and level reference	Equivalent FCS													
	1. Flight Deck Layout And Structure	2. Flight Control Forces And Hardware	3. Flight Control Systems Operation	4. Aircraft Systems	5. Performance And Handling On Ground	6. Performance And Handling In Ground Effect	7. Performance And Handling Out Of Ground Effect	8. Sound Cueing	9. Vibration Cueing	10. Motion Cueing	11. Visual Cueing	12. Navigation	13. Atmosphere And Weather	14. Operating Sites And Terrain
FNPT I	G	G	G	N	N	N	G	N	N	N	N	R	N	N
FNPT II	G	G	G	G	G	G	G	G	N	N	G	R	G	G
FNPT II MCC	G	G	G	G	G	G	G	G	N	N	G	R	G	G
FTD 2	S	R	S	S	N	G	G	G	N	N	N	S	N	N
FSTD qualified to an equivalent standard to level B	S	R	S	S	R	R	R	G	R	G	G	S	G	G
FFS level C	S	S	S	S	S	S	S	R	R	S	R	S	S	S

(b) the FSTDs have:

- (1) tactile hardware;
- (2) primary flight controls whose forces change according to different flight conditions for exercises involving manual flight, except in the case of FSTDs whose FCS is below the equivalent of an FNPT II;
- (3) in the case of use for MCC training, all the systems, the instrumentation and the indicators required in CS-FSTD for the purpose of MCC training.

Rationale

Based on the comments from the stakeholders in September 2024 on the need to clarify how to treat newly qualified FSTD with interim qualification, the equivalence to FFS interim level C is established exclusively due to the presence of a single reference to such FSTD type and level in point FCL. 730.A.

ARA.FSTD.100 Initial e Evaluation procedure

RMT.0196

- (a) Upon receiving an application for an FSTD qualification ~~certificate~~, the competent authority shall:
- (1) evaluate whether the FSTD ~~submitted for initial evaluation or for upgrading~~ complies against with the applicable qualification basis, by conducting objective, functions and subjective tests;
 - (2) assess the FSTD in those areas that are essential to completing the flight crew member training, testing and checking process, as applicable;
 - (3) assess whether the chosen validation data is suitable to support each objective test;
 - ~~(3) — conduct objective, subjective and functions tests in accordance with the qualification basis, and review the results of such tests to establish the qualification test guide (QTG); and~~
 - (4) review the equipment specification list (ESL) for compliance with the applicable requirements;
 - ~~(4)~~(5) verify if the organisation operating the FSTD is in compliance with the applicable requirements. ~~This does not apply to the initial evaluation of basic instrument training devices (BITDs).~~
- (b) The competent authority shall perform the tasks under points (1), (2) and (4) of point (a) in case of recurrent evaluation of FSTD.
- (c) In case of a major modification to an FSTD, the competent authority shall perform those tasks from the ones listed in point (a) which it deems relevant, taking into consideration the nature of the modification.
- (d) The competent authority shall provide a report and notify the organisation that operates the FSTD about the results of the evaluation.
- (e) If, during an evaluation or by any other means, evidence is found by the competent authority that the FSTD is not performing in accordance with its qualification basis, or that the ESL contains inaccurate information about the FSTD, the competent authority shall raise an item, record it and communicate it to the organisation that operates the FSTD in writing. The competent authority shall, unless the nature of the item requires the application of enforcement measures in accordance with point ARA.FSTD.135(b), do all the following:
- (1) grant the organisation a corrective action implementation period appropriate to the nature of the item that in any case shall not be more than 30 days. At the end of this period, and subject to the nature of the item, the competent authority may extend the implementation period subject to a satisfactory corrective action plan agreed by the competent authority;
 - (2) assess if the corrective action plan proposed by the organisation addresses the item;
 - (3) assess if the implementation of the corrective action plan addresses the item.
- ~~(b) The competent authority shall only approve the QTG after completion of the initial evaluation of the FSTD and when all discrepancies in the QTG have been addressed to the satisfaction of the competent authority. The QTG resulting from the initial evaluation procedure shall be the master QTG (MQTG), which shall be the basis for the FSTD qualification and subsequent recurrent FSTD evaluations.~~

(f) The QTG resulting from the initial evaluation shall be approved by the competent authority only after all items have been addressed to the satisfaction of the competent authority. After such approval, it shall be referred to as the master qualification test guide (Master QTG) and shall be the basis for the FSTD qualification and recurrent FSTD evaluations.

(g) The competent authority shall qualify the FSTD only after having validated that, in accordance with point ORA.FSTD.120(d), additional equipment of the FSTD, if applicable, has no adverse effect on the training capability of the FSTD.

~~(e)~~(h) Qualification basis and special conditions.

- (1) The competent authority may prescribe special conditions for the FSTD qualification basis when the requirements of point ORA.FSTD.210(a) are met and when it is demonstrated that the special conditions ensure an equivalent level of safety to that established in the applicable certification specification.

[...]

Rationale

Based on the comments from the focused consultations:

New point (e) is proposed to due to comments and conclusions that the rules shall specify the obligations of the authority in case of detected non-compliance of an FSTD with its qualification basis or when the equipment specification list (ESL) contains inaccurate information about FSTD. In such situations, the competent authority shall raise a non-compliance (item), record it and communicate it to the organisation operating FSTD, giving an opportunity to correct it within a defined period. The proposed 30 days period (point (e)(1)) is based on the current practice (AMC1 ARA.FSTD.135 and AMC2 ARA.FSTD.100(a)(1) point (b)). The rationale to create this new point is to ensure an alignment with the new point ORA.FSTD.100 (c), but also to fill the gap in the rules regarding the possibility for the authority to raise an item after an evaluation of FSTD and request an organisation to take corrective actions. Such concept currently exists only in the AMC to ARA.FSTD.100, however, considering the comments, it is proposed to escalate it to the hard law to ensure legal certainty. The proposed text follows the concept of point ARA.GEN.350(d) when an authority raises a finding due to non-compliance of the organisation with the applicable requirements.

ARA.FSTD.135 ~~Findings and corrective actions~~ – FSTD qualification certificate – limitation, suspension, revocation

RMT.0196

(a) The competent authority shall limit, suspend or revoke, as applicable, an FSTD qualification certificate in accordance with ARA.GEN.350 in, but not limited to, the following circumstances:

~~(a)~~ (1) obtaining the FSTD qualification certificate by falsification of submitted documentary evidence;

~~(b) the organisation operating the FSTD can no longer demonstrate that the FSTD complies with its qualification basis; or~~

~~(c)~~ (2) the organisation operating the FSTD no longer complies with the applicable requirements of Part-ORA.

(b) The competent authority shall limit, suspend or revoke, as applicable, an FSTD qualification certificate after raising an item in accordance with point ARA.FSTD.100 (e) and detecting that:

(1) the FSTD fails to comply with its qualification basis and the non-compliance adversely affects training, testing or checking;

(2) an organisation operating FSTD fails to submit an acceptable corrective action plan to address item(s) raised during an evaluation or by any other means, or to perform the corrective action to the satisfaction and within the period agreed by the competent authority in accordance with point ARA.FSTD.100(e).

Rationale

The title of point ARA.FSTD.135 has been changed to reflect the content of the provision.

The provision is restructured, based on the comments from the Advisory Bodies and conclusions that the rule should clarify how the authority reacts in case of non-compliance of the organisation operating the FSTD and in case of non-compliance of the FSTD. Therefore, the point ARA.FSTD.135 is split in two points (a) and (b), addressing:

- (1) enforcement measures when the organisation operating the FSTD is not in compliance with the requirements (point a) and
- (2) enforcement measures in case of non-compliance of an FSTD (point b).

The point (a) states circumstances where the authority shall limit, suspend or revoke an FSTD certificate when the organisation operating FSTD does not comply with the applicable requirements. The points (a), (c) are existing ones, becoming (1) and (2). Under the circumstances, mentioned in (a)(1) and (2), the authority follows process established in ARA.GEN.350 and limits, suspends or revokes, as applicable.

The point (b) states circumstances where the authority shall limit, suspend or revoke an FSTD certificate when there is an item of the FSTD raised by the authority following the process in ARA.FSTD.100(e) and detecting that:

- (1) FSTD fails to comply with its qualification basis and that non-compliance adversely affecting the use of the FSTD (similar to former point (c) of that provision). The intention is that there should be evidence of non-compliance of the FSTD that negatively affects the training, testing, checking.

(2) an FSTD non-compliance(item) is not addressed, either because the organisation fails to submit an acceptable corrective action plan or has not implement the corrective action plan to the satisfaction to the authority and within a period agreed.

Appendix IV to ANNEX VI (Part-ARA) – Flight simulation training device qualification certificate

RMT.0196

Introduction

~~EASA Form 145 shall be used for the FSTD qualification certificate. This document shall contain the FSTD Specification including any limitation(s) and special authorisation(s) or approval(s) as appropriate to the FSTD concerned. The qualification certificate shall be printed in English and in any other language(s) determined by the competent authority.~~

~~Convertible FSTDs shall have a separate qualification certificate for each aircraft type. Different engine and equipment fit on one FSTD shall not require separate qualification certificates. All qualification certificates shall carry a serial number prefixed by a code in letters, which shall be specific to that FSTD. The letter code shall be specific to the competent authority of issue.~~

European Union (*)

[Competent Authority]

FLIGHT SIMULATION TRAINING DEVICE (FSTD) QUALIFICATION CERTIFICATE

Pursuant to Commission Regulation (EU) No 1178/2011 and subject to the conditions specified below, the [competent authority] hereby certifies that

FSTD [IDENTIFICATION]

[FSTD MANUFACTURER AND SERIAL NUMBER]

located at

[LOCATION OF THE DEVICE]

operated by

[HOLDER OF THE QUALIFICATION CERTIFICATE]

has satisfied the qualification requirements in accordance with the applicable primary reference document and Part-ORA, subject to the conditions of the attached FSTD specifications.

This qualification certificate shall remain valid subject to the FSTD and the holder of the qualification certificate remaining in compliance with the applicable requirements of Part-ORA, unless it has been surrendered, superseded, suspended or revoked.

Date of initial issue:

Revision:

Date of revision:

For the [competent authority]

Signature:

(*) 'European Union' to be deleted for non-EU Member States or EASA
EASA Form 145 Issue 2 – page 1/2

FSTD QUALIFICATION CERTIFICATE: [Reference]

FSTD SPECIFICATION

A.	Primary reference document (PRD)	
B.	(for legacy FSTD only) FSTD type and level Group of aircraft/Type/Type and variant	
C.	Additional capabilities:	
D.	Limitations:	
E.	Remarks:	

FSTD CAPABILITY SIGNATURE (FCS)

F.	FSTD FEATURE	FIDELITY LEVEL	Simulated aircraft
1.	Flight Deck Layout And Structure (FDK)		
2.	Flight Control Forces And Hardware (CLH)		
3.	Flight Control Systems Operation (CLO)		
4.	Aircraft Systems (SYS)		
5.	Performance And Handling On Ground (GND)		
6.	Performance And Handling In Ground Effect (IGE)		
7.	Performance And Handling Out Of Ground Effect (OGE)		
8.	Sound Cueing (SND)		
9.	Vibration Cueing (VIB)		
10.	Motion Cueing (MTN)		
11.	Visual Cueing (VIS)		
12.	Navigation (NAV)		
13.	Atmosphere And Weather (ATM)		
14.	Operating Sites And Terrain (OST)		

Instructions for the issue of the FSTD qualification certificate

(a) EASA Form 145 shall be used for the FSTD qualification certificate.

This document shall contain the FSTD Specification, FCS where applicable, including any limitation(s) as appropriate to the FSTD concerned.

(b) The qualification certificate shall be printed in English and in any other language(s) determined by the competent authority.

(c) Separate qualification certificates shall be issued for:

- (1) each combination of flight deck and platform in case of major interchangeable assemblies;
- (2) each flight deck to be used as an FSTD in case of major interchangeable assemblies. The FSTD qualification certificate shall specify the serial number of the flight deck.

(d) The identification of each flight deck and platform shall be established by using serial number placards and each flight deck and platform combination shall have a qualification certificate with a single FSTD serial number which contains the identification/serial number of the flight deck and platform.

(e) Different engine fit and alternate thrust ratings on one FSTD shall not require separate qualification certificates as long as the FCS is not changed.

(f) Different equipment, such as avionics fits, included in one FSTD shall not require separate qualification certificates. However, major differences in avionics may result in aircraft variants, which may require separate software loads. In such cases, separate FSTD qualification certificates shall be issued.

(g) The FSTD indicated on the qualification certificate shall carry a serial number prefixed by a code in letters. The letter code shall be specific to the competent authority of issue.

(h) In the table 'FSTD Specification', FSTD shall be defined by the PRD which is defined in the Master QTG and indicate any limitations to the FSTD, if applicable. In case of a legacy FSTD, the FSTD specification table shall specify:

- (1) the FSTD type and level and
- (2) the simulated aircraft type or type and variant or group of aircraft (e.g aircraft category, engine configuration, wake-turbulence category, as applicable).

(i) The competent authority shall specify in the table 'FSTD Specification' under 'Additional capabilities' that an FSTD with FCS is qualified for MCC when:

- (1) the FSTD meets the requirements for MCC as specified in the applicable PRD; and
- (2) the FSTD has an FCS which is equal or higher than:

	1. Flight Deck Layout And Structure	2. Flight Control Forces And Hardware	3. Flight Control Systems Operation	4. Aircraft Systems	5. Performance And Handling On Ground	6. Performance And Handling In Ground Effect	7. Performance And Handling Out Of Ground Effect	8. Sound Cueing	9. Vibration Cueing	10. Motion Cueing	11. Visual Cueing	12. Navigation	13. Atmosphere And Weather	14. Operating Sites And Terrain
FSTD aeroplane	G	G	G	G	G	G	G	G	N	N	G	R	G	G
FSTD helicopters	R	G	R	G	G	G	G	G	N	N	R	R	G	G

(j) The competent authority shall specify, in the table 'FSTD Specification' under 'Additional capabilities', that an aeroplane FSTD is qualified for UPRT when:

- (1) in case of a legacy FSTD, the FSTD meets all the technical requirements for UPRT in the CS-FSTD(A) issue 2 or CS-FSTD;
- (2) in case of an FSTD with FCS:
 - (i) the FSTD meets the requirements in point (j)(1); and
 - (ii) the FSTD has an FCS which is equal or higher than:

	1. Flight Deck Layout And Structure	2. Flight Control Forces And Hardware	3. Flight Control Systems Operation	4. Aircraft Systems	5. Performance And Handling On Ground	6. Performance And Handling In Ground Effect	7. Performance And Handling Out Of Ground Effect	8. Sound Cueing	9. Vibration Cueing	10. Motion Cueing	11. Visual Cueing	12. Navigation	13. Atmosphere And Weather	14. Operating Sites And Terrain
FSTD aeroplane	S	S	S	S	S	S	S	R	R	S	R	S	S	S

In case the FSTD is qualified for UPRT, the qualification certificate shall specify whether it is 'approach to stall' or 'full/post stall' capable in the table 'FSTD Specification' in the corresponding cell related to 'Additional capabilities'.

(l) In the table 'FSTD capability signature', the FSTD shall be defined by its FCS, unless it is a legacy FSTD. In case of an FSTD which falls under point 2(a)(i)(A) and point 2(a)(ii)(A) of Article 10b of this Regulation, the table 'FSTD capability signature' shall be filled in with the assigned FCS according to Appendix IX to Annex VI (Part-ARA).

(m) Completion of the qualification certificate for FSTDs with an FCS:

- (1) When the FSTD qualification process validates the FCS declared in the application, the relevant FSTD feature fidelity level codes (N, G, R or S) shall be entered on the FSTD

- qualification certificate in the 'Fidelity level' column of the 'FSTD Capability Signature (FCS)' table for each feature in turn.
- (2) Where an FCS feature is either not applicable or not available for the FSTD being qualified, the code 'N' shall be entered into the fidelity level box.
 - (3) Where the FSTD feature "Aircraft Systems" reflects different aircraft systems which are at different fidelity levels, the highest fidelity level should be entered and marked with an asterisk (*). The simulated aircraft systems and the related fidelity level shall be specified on the equipment specification list (ESL). In this case, the following statement shall be made in the "remarks" column: 'Not all aircraft systems are simulated and/or are at the same fidelity level. Please refer to ESL'.
 - (4) Where the FSTD feature "Flight Control Forces And Hardware" reflects flight controls which are at different fidelity levels, the highest fidelity level should be entered and marked with an asterisk (*). The simulated flight control forces and hardware and the related fidelity level shall be specified on the equipment specification list (ESL). In this case, the following statement shall be made in the "remarks" column: 'Not all Flight Control Forces and Hardware are simulated and/or are at the same fidelity level. Please refer to ESL'.
 - (5) In case of an interim qualification in accordance with point ARA.FSTD.115, the qualification certificate shall indicate the fidelity level and "interim" in the column 'Fidelity Level' for the applicable features in the table 'FSTD Capability Signature'.
 - (6) For the applicable FSTD features, simulated aircraft shall be entered on the FSTD qualification certificate in the 'simulated aircraft' column of the 'FSTD Capability Signature (FCS)'. The simulated aircraft shall be specified as follows:

- i. In case the fidelity level is 'S' in any of the aircraft simulation features (1-7) and/or the cueing features (sound and vibration), an aircraft type and variant (make, model and series) shall be specified in the "Simulated aircraft" column.

- ii. In case the fidelity level is 'R' in any of the aircraft simulation features (1-7) and/or the cueing features (sound and vibration), an aircraft type (make and model) shall be specified in the "Simulated aircraft" column.

- iii. In case the fidelity level is 'G' in any of the aircraft simulation features (1-7) and/or the cueing features (sound and vibration), a group of aircraft shall be specified in the "Simulated aircraft" column by indicating:

A. Aircraft category: aeroplane, helicopter, tilt-rotor, eVTOL, airship; and

B. Engine configuration; and

C. Wake-turbulence category for the features where it is applicable.

Rationale

Update from the focused consultations in March 2024 and September 2024

- A new row "Additional capabilities" is added in the FSTD template to identify whether the FSTD has MCC, UPRT qualification. The reason to add it in the QC is that MCC/UPRT is an additional capability of the FSTD which should be granted in the qualification process by the authority.
- In the instructions how to complete the certificate, it is clarified that:

- in order an FSTD with FCS to be qualified for MCC, it shall meet the requirements for MCC as specified in the applicable PRD and has an FCS which is equal or high to the FCS for FNPT II MCC in accordance with point FCL.036(a)(1) for aeroplanes and point FCL.036(a)(2) for helicopters.
- in order an FSTD with FCS to be qualified for UPRT, it shall:
 - meets all the technical requirements for UPRT in the CS-FSTD(A) issue 2 or CS-FSTD;
 - the equivalent FCS for FFS level C in accordance with point FCL.036(a)(1).
- The FSTD feature “Flight Controls Forces & Hardware”, similarly to the feature “Aircraft systems” may be marked with an asterisk (*) in the QC. The reason is that flight controls may be at different fidelity levels and thus the certificate shall reflect the highest fidelity level, however with the asterisk to pay attention that simulated flight control forces and hardware and the related fidelity level shall be specified on the equipment specification list (ESL).
- For FSTD with interim qualification, it is proposed that when the certificate indicates the fidelity level, the wording “interim” should be added in the column ‘Fidelity Level’ for the applicable features in the table ‘FSTD Capability Signature’
- The instructions are amended to established to provide clarity how to describe an FSTD with G fidelity level. The provision is aimed at establishing a standard approach in describing such FSTDs.

ORA.FSTD.100 General

RMT.0196

- (a) The applicant for an FSTD qualification shall demonstrate to the competent authority that it has established a management system in accordance with [Subpart GEN, Section II of this Part ORA-GEN Section II](#). This demonstration shall ensure that the applicant has, directly or through contract, the capability to maintain the performance, functions and other characteristics specified for the FSTD's qualification level and to control the installations of the FSTD.
- ~~(b) If the applicant is the holder of a qualification certificate issued in accordance with this Part, the FSTD specifications shall be detailed:~~
- ~~(1) in the terms of the ATO certificate; or~~
 - ~~(2) in the case of an AOC holder, in the training manual.~~
- (b) The organisation operating the FSTD shall provide the competent authority with documentation demonstrating how it complies with the requirements established in this Regulation. Such documentation shall include a procedure describing how the equipment specification list (ESL) is established and maintained.
- (c) In case the organisation operating the FSTD is notified by the competent authority of a non-compliance of the FSTD with its qualification basis in accordance with point ARA.FSTD.100(e), the organisation shall:
- (1) define a corrective action plan addressing all items, and in case of recurring, systemic or critical items identify the root cause of the non-compliance(s);
 - (2) within the period specified in point ARA.FSTD.100(e)(1), submit the corrective action plan which shall be implemented to the satisfaction of the competent authority and within a period agreed with that authority;
 - (3) after the corrective action plan has been implemented, inform the competent authority by sending the associated evidence.
- (d) Every year the organisation operating the FSTD shall provide the competent authority with FSTD metrics to demonstrate the FSTD performance, use and other characteristics.

Rationale

New point (d) is established to request the organisation operating FSTD to provide information on the FSTD performance, use and other characteristics. Such requirement already exists in AMC2 ORA.FSTD.100. It is proposed to move it in the hard law to ensure legal clarity and certainty. In addition, it follows the implementation of the risk-based oversight by the authorities by allowing them to receive annual information on the FSTD performance which will support developing of the oversight programme.

ORA.FSTD.105 Maintaining the FSTD qualification

RMT.0196

- ~~(a) In order to maintain the qualification of the FSTD, an FSTD qualification certificate holder shall run the complete set of tests contained within the master qualification test guide (MQTG) and functions and subjective tests progressively over a 12-month period.~~
- ~~(b) The results shall be dated, marked as analysed and evaluated, and retained in accordance with ORA.FSTD.240, in order to demonstrate that the FSTD standards are being maintained.~~
- ~~(c) A configuration control system shall be established to ensure the continued integrity of the hardware and software of the qualified FSTD.~~

(a) The organisation operating the FSTD shall perform all the following to maintain the FSTD qualification:

- (1) maintain the FSTD in a condition that it consistently performs according to the qualification basis, including conducting functional pre-flight checks within the preceding 24 hours of using the FSTD for training, testing or checking.
- (2) conduct the complete set of objective tests contained in the Master Qualification Test Guide (MQTG), progressively over a 12-month cycle. Results from these tests shall be evaluated, dated, marked as analysed and retained in accordance with point ORA.FSTD.240 in order to demonstrate that the FSTD standards are being maintained.
- (3) conduct the complete set of functions and subjective tests contained in the Master Qualification Test Guide (MQTG) progressively over a 24-month cycle. The results of each fly-out shall:
 - (i) be accompanied by a declaration that the FSTD has been tested;
 - (ii) demonstrate that the FSTD standards are being maintained; and
 - (iii) be retained in accordance with point ORA.FSTD.240.
- (4) preserve the integrity of the hardware and software of the FSTD and establish and maintain a configuration control system, including database management.

(b) In case of a non-compliance identified during the tests referred to in points (a)(2) and (3), the organisation shall implement corrective actions to address the non-compliance which shall be retained in accordance with point ORA.FSTD.240.

(c) If an organisation plans to remove an FSTD from active status for prolonged periods, the organisation shall:

- (1) notify the competent authority; and
- (2) establish suitable controls for the period during which the FSTD is inactive.

The organisation shall agree with the competent authority a plan for the de-activation, storage and re-activation to ensure that the FSTD can be restored to active status at its original qualification.

Rationale

The whole provision is redrafted to address the feedback from the Advisory Bodies during consultations in March and September 2024. Point (a) specifies the main objective when maintaining the FSTD, e.g. that FSTD performs consistently according to the qualification basis. In addition, it specifies that the organisation shall perform pre-flight checks within the preceding 24 hours of using the FSTD. Such obligation was currently under CS-FSTD(A) issue 2/CS-FSTD(H) and was moved in this point, because CS-FSTD does/should not define the obligations of the organisations operating FSTD.

The current text in point ORA.FSTD.105 (a) and (b) are moved to point (a)(2).

Considering the feedback from the Advisory bodies during the workshop on the draft CS-FSTD in September 2024, EASA proposes that functions and subjective tests (F&S tests) contained in the Master Qualification Test Guide (MQTG) are conducted progressively over a 24-month cycle, e.g. different from the cycle proposed for the objective tests. The proposed change is justified by the fact that currently such tests are done with a frequency which has been evidenced to be unproductive (4 flyouts over a 12-month cycle) and has been deemed to add minimal value to both the operator and the competent authority. The number of such tests performed on a quarterly basis have shown to lead to unnecessary FSTD resource utilisation. In addition to the different frequency, the process to mark and evaluate the results of the functions and subjective tests is strengthened with the rationale to provide value for the organisation, operating the FSTD. In this sense, it is proposed that the results of the fly out shall be accompanied by a declaration that the FSTD has been tested to demonstrate that the FSTD standards are being maintained.

The current point (c) becomes point (a)(4), clarifying to the obligation of the organisation to establish and maintain database management as part of the configuration management process.

Following questions from stakeholders, a legal obligation for the organisation operating FSTD is established to address non-compliance identified during the conduct of the tests by taking corrective actions(s) and keep records of them in its system. This obligation is established to provide legal clarity.

The new point (c) is based on ORA.FSTD.230(d) which is moved here as it refers to obligation of the organisation how to ensure continuation of the FSTD qualification in case of de-activation/re-activation of the FSTD.

ORA.FSTD.200 Application for FSTD qualification

- (a) The application for an FSTD qualification certificate shall be made by the organisation operating the FSTD in a form and manner established by the competent authority. It shall include:
- (1a) ~~in the case of basic instrument training devices (BITDs), by the BITD manufacturer~~ the initial application form together with:
 - (1) a table of chosen validation data, specifying the unique data source for each objective test; and
 - (2) an equipment specification list (ESL);
 - (2b) ~~in all other cases, by the organisation intending to operate the FSTD~~ a declaration that the organisation operating the FSTD has performed all required objective tests of the FSTD and that it meets the criteria in the applicable qualification basis together with the qualification test guide, including validation data roadmap and the engineering report; and
- (c) a declaration indicating that:
- (1) all objective tests, functions and subjective test have been completed as well as general requirements for the requested FCS have been met; and
 - (2) the FSTD complies with the applicable requirements and with the simulated aircraft as appropriate for each FSTD feature.
- (b) ~~Applicants for an initial qualification shall provide the competent authority with documentation demonstrating how they will comply with the requirements established in this Regulation. Such documentation shall include the procedure established to ensure compliance with ORA.GEN.130 and ORA.FSTD.230.~~

Rationale

The whole point ORA.FSTD.200 is revised to clarify the application form and attached documents in support of each application phase, following the FCS concept. The proposal follows the current practice of application form in 3 parts:

Part A, specified under point (a) which is the initial application form, together with the specified documents (a)(1) and (2). Considering the comments from the stakeholders, the point is changed to clarify that the organisation operating the FSTD shall provide only a table of chosen validation data and not the entire validation data roadmap. The intention is to request such summary (matrix) of the validation data which is used for each objective tests with initial application form.

Part B which is specified in point (b) requiring a declaration that the organisation performed all objective tests, together with the QTG, VDR and engineering report;

Part C, specified under point (c) is a declaration that all objective, functions and subjective tests are completed and FSTD complies with the simulated aircraft type or a group of aircraft as appropriate for each feature.

The text of the proposed provision is re-drafted after the focused consultation in September 2024 with the Advisory Bodies to align with the new (draft) CS-FSTD, mainly regarding the certification specifications for the validation data roadmap, the engineering report and the validation data. According to the new CS-FSTD, validation data, validation data roadmap (VDR) and engineering report (ER) will be is required for every newly qualified FSTD.

~~(a) The holder of an FSTD qualification certificate shall inform the competent authority of any proposed changes to the FSTD, such as:~~

- ~~(1) major modifications;~~
- ~~(2) relocation of the FSTD; and~~
- ~~(3) any de-activation of the FSTD.~~

~~(b) In case of an upgrade of the FSTD qualification level, the organisation shall apply to the competent authority for an upgrade evaluation. The organisation shall run all validation tests for the requested qualification level. Results from previous evaluations shall not be used to validate FSTD performance for the current upgrade.~~

~~(c) When an FSTD is moved to a new location, the organisation shall inform the competent authority before the planned activity along with a schedule of related events.~~

~~Prior to returning the FSTD to service at the new location, the organisation shall perform at least one third of the objective tests, and functions and subjective tests to ensure that the FSTD performance meets its original qualification standard. A copy of the test documentation shall be retained together with the FSTD records for review by the competent authority.~~

~~The competent authority may perform an evaluation of the FSTD after relocation. The evaluation shall be in accordance with the original qualification basis of the FSTD.~~

~~(d) If an organisation plans to remove an FSTD from active status for prolonged periods, the competent authority shall be notified and suitable controls established for the period during which the FSTD is inactive.~~

~~The organisation shall agree with the competent authority a plan for the de-activation, any storage and re-activation to ensure that the FSTD can be restored to active status at its original qualification level.~~

Rationale

After review of the hard law amendments, it is proposed that the entire point ORA.FSTD.235 is deleted, as the changes proposed in ORA.FSTD.110 are considered comprehensive for the management of modification of FSTD. Therefore, this point is deemed redundant.

The current point (a) is deleted as it becomes repetitive in the context of the new proposals in point ORA.FSTD.110. According to proposed ORA.FSTD.110(a) a change to the FSTD qualification certificate is a major modification and this includes also relocation, de-activation of the FSTD.

The current point (b) is deleted as the term “upgrade” of FSTD became useless in the context of the FCS framework.

Point (c) is proposed to be deleted in the hard law. The rationale is that relocation of FSTD is a major modification and point ORA.FSTD.100 sets up the framework for managing such modifications. In case of relocation of the FSTD, the organisation shall apply to the competent authority and performs the relocation after obtaining approval, unless it is entitled to manage the modification in accordance with a procedure approved by the competent authority in accordance with point ORA.FSTD.130(b). The current text that the organisation to perform at least one first of the objective, functions and subjective tests is foreseen in the supporting AMC to this point.

The possibility in the current point (c) that the competent authority may perform an evaluation of the FSTD after relocation is foreseen in point ARA.FSTD.125. The same point ARA.FSTD.125 also envisages that the evaluation shall be in accordance with the original qualification basis of the FSTD.

The current point (d) is moved in ORA.FSTD.105 as it refers to obligation of the organisation how to ensure continuation of the FSTD qualification in case of de-activation/re-activation of the FSTD.